604
[352] From the rafters hung ten hammocks, as well as bows, ar-
rows, bowls and other objects. The youth offered us a bowl filled
● 262 with the fruit of the muriti palm (Mauricia venifera); he showed the
574] greatest desire to [78] oblige us, and pronounced himself ready to ac-
company us to Necodemos if his father agreed. We blew our horn to
call the father but no one appeared, and after waiting an hour I de-
cided to move on and in fact did so, reluctantly leaving behind this
engaging savage who had received me in his hut so cheerfully

361 In the afternoon, having crossed the forest, we walked out
upon a vast plain and saw on the crest of a hill the maloca or village
of Absenanti.

What startled me was that we always made such encounters
when we least expected them, for I never succeeded in having the
guide tell me beforehand what road we were to follow or what locali-
ties we were to encounter.

342 The village of Absenanti was under construction; it comprised
621 but one large new house, with a thatch-covered roof which consisted
of a simple leaning wall, slanting down from east to west.

We found no one inside the house but the large number
[352] of hammocks, bows, and arrows which hung from the roof indicated
that it was occupied by several families.

The fire was lit; as usual we blew our horn in order to
call the occupants of the house.

[609] It was not long before a slender youth appeared, a mis-
trustful look on his face, leading by the hand a small child who was
very frightened and excited.

302 This youth was about twenty; his face was not yet com-
pletely painted. It merely bore the lozenges; that part which con-
sists of a solid layer of black dye, as per the custom of the tribe, had
not yet been completed. These drawings, with their geometric
regularity and [79] their fresh and vivid color, stood out on his youth-
ful complexion and lent his features a certain novel comeliness.

609 When night came they told me that a few men, women
and children, who were turning in to the maloca from the surrounding
woods had stopped by a nearby stream and hesitated to come home
because of our presence.

123 In view of this I broke camp and moved about a mile away,
609 leaving my interpreter to spend the night in Absenanti and to con-
vince those mistrustful people that we had not the slightest intention
to harm them.

773 on the hills of Areucrê. He had Rairũ snatched away by the clouds,
172 and he himself disappeared from Necodemos, following the course of the Tapajoz; on the left bank of the river, at a height no human hand can reach, he also drew some characters on the cliff of Cantagalo.

773 And since then no one has known where he is. The Mundurucu faithfully preserve the memory of his deeds, and paint themselves, their wives and their children in exactly the same fashion as Caru-Sacaebê was painted.

VI

Appearance of the dog in Necodemos -- Legend

Among all peoples, the dog is looked upon as a faithful
[825] friend. The Mundurucu, who are hunting savages, picture the dog in their legends as descended from a maiden of their tribe and from an unknown warrior, who appeared in the maloca and disappeared again without anyone finding out who he was, whence he had come, or where he had gone. He was a deus ignotus.

The story ran as follows. After Caru-Sacaebê had disappeared, the Mundurucu of Necodemos continued [89] to hunt, searching every part of the plains and forests. One day, while they were out hunting, an unknown warrior by the name of Caru-Pitubê appeared at the maloca.

He went to the ekçá, climbed into a hammock, seized a horn from the roof, and proceeded to blow upon it in a peculiar way. A maiden of the maloca, Iracheru by name, responded to
[262] [574] the call and offered the warrior daũ [food prepared from Brazil nuts] as a sign of good hospitality.

Caru-Pitubê had arrived almost at nightfall.

There was no one else in Necodemos.

727 when they feel or fear they are being pursued. At night they
[373] guide themselves with torches made with fragments of a resinous wood which they call ouichique-taque, and which the Indians of the Lower Tapajoz know by the name of pau candeia [(Port.) "lamp wood"]. This wood, when dry, catches fire easily; it blazes brightly when carried on the run.

726 Almost invariably these expeditions last so long that the
[262] Indians run out of provisions and subsist on chestnuts rather than manioc flour and sweet potatoes. They suffer long privations; some of them return thin.

It is maintained that the Mundurucu make these forays every year and that they always bring captives.

A very old Indian woman, probably a native of the interesting Tapajoz tribe which gave the river its name and which is now extinct, told me that more than once during her youth [96] the Mundurucu had come down the banks of the Upper and Lower Tapajoz, striking cruelly at the many malocas then extent, cutting enemy heads, and spreading boundless terror throughout the region.

A well-verified tradition also has it that these barbarians once reached the mouth of the Tapajoz, and besieged the fort built by the Portuguese in the Christian Tapajoz village which is now the site of the flourishing city of Santarém.

X

Facts about some native tribes whom the Mundurucu fight and who wander through the valley of the Upper Xingu and toward the borders of Mato-Grosso.

c48 The Mundurucu say that they still find many heathen bands
[523] in the extensive regions they roam, and that towards the east there runs a broad and mighty river, full of waterfalls, which they call Caruntunzi and the banks of which are inhabited by many pagans.

This must be the Upper Xingu, which is indeed one of the major tributaries of the Amazon and one of those which run closest to the capital of Pará. Its upper course, however, is still entirely unknown.

461 Whenever I had the opportunity to enter one of those
252 houses, I always found the women working; some wove hammocks, some made flour, others smoked meat, some cooked, some prepared banana mush, etc.

262 They never failed to offer me something to eat: now
574 cooked sweet potatoes, now banana mush. [104]

[386] A cheerful and merry Indian woman, her face all painted up with urucu dye in addition to the usual designs, offered me a tremendous caterpillar which she held on her finger. It was a repulsive thing which contracted and stretched convulsively; and the woman insisted upon transferring it to my own hand, telling me that it was something to eat: "Cobi-cobi."

XIV

Symbolic characters drawn on the cliff of Cantagalo, on the banks of the Upper Tapajoz, and on the hills of Areu-crê between Acupari and Necodemos.

172 On the left bank of the Upper Tapajoz, in the place known
532 as Cantagalo, fifteen figures are to be seen, drawn on the face of a cliff which is about one hundred meters high and which was carved perpendicularly by the stream.

These figures have been there for ages untold: the oldest frontiersmen who explored the Upper Tapajoz, and the oldest Mundurucu, found them just as they are but do not understand their meaning.

They are dark red, like ocher, and stand about eight meters above the highest level of the water at the time of its maximum winter swelling.

At the present time it would be impossible for a man to draw them at this height, even with the help of scaffolding, for the current is fierce where the river curves in at the base of the cliff, expecially at the time of year when the water level reaches its maximum height.

Fruits of the Fields

222
824 jaboticaba
137 mangaba
field caju
axiua
muruci
marmelada
field araticu
pineapple

jubã
unhua
hacerácaraũ
eten-ã
quenhen-ã
hera-ã
bocubocu baru
iparã

252 Daũ is the favorite food of the Mundurucu. It is prepared
137 with Pará chestnuts.

This nut is quite well known, for the province of Pará yearly exports it to Europe by the thousands of hectoliters.

It is known in Europe as the Brazil nut, and contains sixty per cent light and delicately flavored oil.

252 To prepare daũ, the Mundurucu cook the nuts, peel them, soak them, mash them, place them in a pot, cover them with leaves, and allow them to smoke for eight days. [121]

This paste undergoes a sort of fermentation and exhales a strong odor.

Then they mash it again and place it in a pan on the fire.

Thus prepared, daũ keeps for a long time.

● 262 They also make another kind of daũ from the same nut; once cooked and mashed, it is mixed with fish or meat.

The Mundurucu also feed on banana mush; yam mush; porridge of manioc flour mixed with assai; pataúá; bacaba; and maniqueira mush.

[272] In summertime they drink a sort of refreshing beverage made from wild beans which they call uteima.

[273] They do not appear to use alcoholic beverages or to become intoxicated.

261 They are very frugal. When game is scarce on rainy winter days, they subsist on sweet potatoes, yams, chestnuts, daũ, etc.

251 They preserve the flesh of game by smoking it slowly over the fire in the accustomed manner.

11: Murphy E-5 (1952-1953) 1958
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patrilineal clans, ranked loosely into unnamed phratries and divided almost equally between exogamous moieties, persisted, but the residential basis of patrilineality disappeared. Males formerly remained in the house and village of their birth, but now they were dispersed by the new marriage rule. Clans lost their lineage nucleii and correspondingly suffered a loss of function. Bride service had in a sense become permanent, and the men's house, formerly the dwelling of village bachelors and young men in bride service, became a permanent dwelling of the men.

That is essentially the situation in the contemporary savannah villages. But the social organization of the Cururú River settlements marks a further change from the savannah pattern. Matrilocality is still rather vaguely regarded as the ideal residence rule for all but the sons of chiefs, and the custom is followed in a significant number of cases. Actually, however, many marriages are patrilocal, and there is an increasing tendency for couples to become neolocal eventually.

Furthermore, family life and the social division of the sexes has been drastically modified on the Cururú River. The Cururú villages are the result of migrations by nuclear and extended families from near-by savannah villages and do not represent the simultaneous moves of entire villages. The men's house was never instituted on the Cururú and dwellings were characteristically small. Thus, the Cururú River houses are the residences of one to three related families, whereas those on the savannahs, even under present conditions of depopulation, have an average number of about four families each. Men reside in the same houses as do their wives and children on the Cururú River, and the nuclear family approaches being an independent social and economic unit. Under these conditions the village has little cohesion, and recurrent factionalism results in the proliferation of new and smaller villages. Among these units there are individual ties of marriage and kinship, but the mission provides almost the only context in which the residents of different villages interact in a group.[13]

Other factors have modified Mundurucú social structure and religion. The population is probably about one fourth of what it was 100 years ago;[14] this has resulted not only in greatly reduced villages and households, but it has decreased the number of shamans. Other influences have aggravated this decline. The end of warfare did much to devitalize the Mundurucú and to promote the growing disinterest in the native culture. It also eliminated a whole range of religious ceremonies that formed part of the head-hunting complex. Finally, there has been a profound shift in subsistence base among those Mundurucú who have moved to the shores of the Tapajós and Cururú rivers. In contrast to the savannah dwellers, who are vigorous hunters, these Indians depend primarily upon fish for protein. This has significance for the religious concepts and activities centered on the animal world and hunting.

[13] The respective social and economic organizations of savannah and Cururú River villages are compared and analyzed with reference to the ecology of rubber collection in another work. (Murphy, 1954.)

[14] According to some sources, this decline has been even greater. Martius (1867, p. 390) estimated the Mundurucú population to be 40,000 in 1819, and Tocantins (1877, p. 101) calculated their number to be 18,910 in 1875.

11: Murphy E-5 (1952-1953) 1958
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of the savannahs and the new ones of the river bank became attenuated, and a lack of powerful shamans in the former communities may well have developed. The shorter *Dajearuparip* ceremony was practiced as recently as 1945 or thereabouts but has since lapsed in spite of a few unsuccessful efforts to resurrect it. By that time the lack of shamans must have become acute, as it is today in many sections of the Mundurucú country. Also, the early 1940's were a period of intense rubber collection, owing to the stimulus provided by World War II. During these years the Mundurucú of the savannah villages grew more accustomed to clothing and other attractions of the outside world, and involvement with Brazilian society increased. The exact effect of these influences is uncertain, but interest in ritual undoubtedly was replaced increasingly by apathy and fatalism in the face of the decay of other aspects of Mundurucú culture. Ceremonialism not only heightens social cohesion, but it reflects it. So far as the structure of Mundurucú society was undermined by other factors, so also was the basis of the ceremonial reunions.

The form of the extinct ceremonies for head-hunting and the spirit mothers of the game was described by informants. Other rites were reported by them in very fragmentary form and were attributed to a more remote past. Only a curing ceremony and the complex of ceremonial activities surrounding the sacred trumpets are still extant and were observed by me.

The Duparip Ceremony

One elderly Mundurucú reported a ceremony called the *Duparip*, which he said had ceased to be practiced long before his birth and which had been related to him as a boy by the old men. The *Duparip* was said to have been held infrequently; it was initiated during the summer, and the associated ritual activities occurred intermittently over a two-year span.

It was not possible to obtain a full account of the purpose or form of the ceremony, for the informant remembered only disconnected items. It obviously had some significance as a rite of passage, for young boys[1] were taken into the men's house and allowed to return to their proper dwellings only at the end of the two-year ceremonial period. During this time they were referred to as pet jacamís by the men, and three stripes were cut through their hair, from front to back, in imitation of the feathering of that bird. When they were finally released from the men's house, they were given sharp wooden "beaks" with which they "pecked" at the women. During their confinement they could leave the men's house only to relieve themselves. The men periodically hastened the growth of the boys by standing upon their feet and lifting them up by the armpits. The "young jacamís" could eat only a certain type of deer, the meat of which was carefully examined for traces of skin, which was believed to make the boys ill.

Other passages of the *Duparip* included the previously mentioned rite in which three powerful shamans transformed people into animals.[2] Flutes were played by

[1] My informant reported that boys are recruited for this ceremony at the age of three; I think this most doubtful and believe that five years is a more reasonable age.

[2] See p. 42.

it, and it served as a general organization for persons of warrior status. The *Dajeboiši* was the leader and organizer of these festivities also and he customarily sent two messengers to the chiefs of the other Mundurucú villages to issue the following invitation: "Come, eat the hide of the game of the *Dajeboiši*. Come, drink *werú* and *mörí*. It is only a mouthful, but come." The chiefs then called their people together and announced, "They want us to come and eat and drink. Everyone who wishes may go." The invited villagers, who had long known of the impending ceremony and were expecting the invitation, cut their hair and ornamented themselves in the traditional Mundurucú style and set out the next day. Food had been amassed by the people of the host village and all settled down to feasting and completing their body painting.

On the day after their arrival, a member of the *Muchacha*[1] society, an exclusive group composed of old and valiant *Dajeboiši* who had mastered great knowledge of lore and songs, sounded the *pem*, a musical instrument used only by them. At this signal all the young boys, who had previously been tonsured and painted, fled into the forest and underbrush to hide from the men. The men then spread throughout the environs of the village and each captured a previously selected boy of the other moiety. The captor decorated the boy with necklaces and belts of glass beads (i.e., during the nineteenth century) and monkeys' teeth. By the time all had been assembled, dusk had already fallen, and the *Darekši* society returned to the village in a single file with the boys in the lead. All the men marched with bows and arrows set in release position. The women remained in the dwelling houses, for it was believed that any who saw the *Darekši* enter the village would be killed during the next war.

After entering the village, the men went to the house of the *Dajeboiši*, where they were served food and drink. A number of small ceramic vessels were laid out in a line and filled with various types of meat in a sauce made from the Brazil nut. Behind each bowl of meat was another filled with a drink prepared from sweet manioc. The line of men passed single file down the row of bowls, each man squatting on his haunches and taking one piece of meat with beijú (a flat manioc flour cake) and a sip of the sweet manioc drink. Then, still squatting, he moved to the right and took another piece of meat and beijú and another sip of the drink. When he reached the end of the line he returned to the beginning; the process was continued until all the food was eaten.

Certain precautions were taken with the drinks because of the sacred nature of the occasion. The Vultures had to eat apart from the other *Darekši*, for if one of the latter were to drink from the same vessel he would turn into a vulture when he died. Also, the sweet manioc drink could be made only by young girls and old women to avoid the threat of contamination of the drink by a drop of menstrual blood or semen from the vagina of a mature woman. The men were prohibited from sexual intercourse immediately before the ceremony for they too could contaminate the beverage and cause others who drank from the vessel to fall victims of the yellowing sickness, or *ujewaií*. To prevent this a shaman examined the

[1] The identity of this term with the Spanish word for 'girl' is an interesting but entirely independent parallel.

12: Murphy E-5 (1952-1953) 1960
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224 hunting and look upon it as one of the acmes of masculine activity, it is extremely exhausting and time-consuming work. The hunters leave their villages shortly after dawn and travel long miles through the forests and across sun-baked savannah before raising the tracks or scent of game. There then follows an arduous pursuit that sometimes lasts for hours. And the successful hunter often ends his day by [482] carrying a one hundred-pound wild pig on his back for three hours on the homeward trail to the village. Occasionally, he makes his kill late in the day and far from home and has to spend the night in the forest. The men hunt nearly every fair day except for those happy occasions when good luck brings a great quantity of game to the village. All activity then stops and the people sit around eating the meat, which would otherwise spoil after about three days. The pressure of maintaining a meat supply is great when one considers that a village of eighty people can eat one tapir or two wild pigs in twenty-four hours. The men are therefore rarely able to relax from hunting for more than two consecutive days.

Of the Mundurucú hunting techniques, the collective hunts are most important. The usual system is for three or four men to go ahead of the others with dogs to raise and chase the game. The rest of the men wait along the path which the animal is expected to follow in its flight, usually at a point where it crosses a stream. This calls for a great deal of teamwork in addition to an intimate knowledge of the country and the habits of game. The pursuing hunters inform their waiting companions of the species of the animal by sounding signals on bamboo hunting horns. If an ambush is not possible, the dogs run down the animals and bring them to bay, allowing the hunters to approach and make the kill. Although individual hunters frequently stalk game, the described techniques are most important [262] for the killing of wild pig, the principal game food.

12:Murphy E-5 (1952-1953) 1960
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222 articles collected are several species of palm fruit, the Brazil nut, the fruit of the *cajú* tree (*Anacardium corymbosum*), wild cocoa, *mangaba*, and several varieties of berries.

222 462 Wild foods found only at long distances from the village are always gathered by the men on the way home from hunting, especially if they have been unsuccessful. When the fruit trees are near the village, one man or an older boy usually goes out with a party of women, the male to climb the tree and get the fruit, the women to carry it [481] home. Climbing is done with the climbing ring, a loop of vine passed around the feet, which gives sufficient pressure of the feet against the sides of the trunk to enable the climber to ascend the tree lightly by a series of jumps—similar to the principle employed by our lumbermen using a belt. For fruits far out on limbs, hooked sticks are used to drag the limbs down, or the climber chops the limb off. [262] Fruits are not a staple food, but they are valuable adjuncts to the diet and greatly appreciated delicacies.

HORTICULTURE

241 Mundurucú gardening is done by the slash-and-burn method used throughout the tropical areas of the New World. The garden is cleared of trees and underbrush at the end of the rainy season, the felled vegetation is allowed to dry during the dry season, and the plot is burned over before the first rains. Burned branches and the smaller trunks are dragged off to one side and the ground is then ready for planting after the first rains, which usually occur in the beginning of September in this region.

241 262 Among the crops of New World origin planted by the Mundurucú are several varieties of bitter manioc (*Manihot utilissima*), which form the dietary staple, sweet manioc (*Manihot aypi*), yam (*Dioscorea sp.*), sweet po-

12:Murphy E-5 (1952-1953) 1960
SQ13 Mundurucu SQ13

tato (*Ipomoea batatas*), maize, beans, squash, pineapple, and pepper. At some time after the advent of the whites in the Western Hemisphere such plants as banana, rice, potato, and sugar cane were introduced. Cotton, although native to the New World, was not adopted and used by the Mundurucú until the nineteenth century. Similarly, although the potato is native in western South America it was not found aboriginally in the eastern part of the continent.

The agricultural land exploitable by each village is more than adequate, but not unlimited. Amazonian forest soil is generally of extremely poor quality. It is loose and friable and thus suitable to the simple digging sticks formerly used by the aborigines in planting, but it lacks the colloids essential to hold the minerals in the topsoil. The result is that the minerals are leached into the subsoil by the heavy annual rains. There is some variation in soil quality, however, even in this rather uniform environment. Much land is unusable in Mundurucú territory because it is periodically inundated or because it is sandy, grass-covered savannah. The tillable forest land is classified by the Mundurucú into the categories of black, red, and clay earth. The latter two are further subdivided if they contain a significant percentage of sand. Black earth is the best land and is usually the only kind in which they raise squash, melon, beans, and rice. These crops can be grown with uncertain prospects of success in red earth while maize can be raised in both. The tuber crops grow in all kinds of soil. Since black earth is not accessible to all villages, the list of Mundurucú crops is often drastically reduced in certain locations.

The land cannot be used for more than two plantings. On the second planting, in all types of soil, only bitter manioc is raised. Certain crops, such as pineapple, replant

/2 cont./

*241 [174] mythological and legendary traditions of the Munduruků lead us to believe that they were not always a people given to the cultivation of plants. This, however, /applies to/ a remote past, which is no longer verifiable nowadays. In historic times, ever since they came *241 175 into contact with civilized people and came to be known, they have been observed to cultivate gardens and to make manioc flour. It is • [269] true that the Munduruků gained greater fame as warriors, for when- [121] ever the opportunity arose they did not hesitate to attack even cities such as Santarém (1780) and Gurupá (1784). (1)

1. Horton, 1948: 272-273.

As colonial rule was strengthened, however, and warring activities decreased, these Indians seem to have tended increasingly toward a more stable way of life and a more extensive and more diversified agriculture. I believe that available texts must be interpreted in this light. Even though they are not all in agreement, the traveling writers provide glimpses of a development in the cultivation methods of these Indians.

*241 [361] Martius, speaking in a general way of the Tupi tribes of the upper Tapajós, including the Munduruků, regards them, precisely because of this incipient agriculture, as seminomadic. He says: "They practice a primitive agriculture and, therefore, they are not nomads in the strict sense of the term; their villages, however, do not remain immutably in the same place." (2) Monteiro Baena

2. "Sie treiben einen nothdurftigen Landbau, sind daher im strengeren Sinne keine Nomaden; doch bleiben ihre Niederlassungen nicht unveraenderlich an derselben Stelle." Martius, 1867: 201.

[175] testifies that at first, in the years following the pacification of the Munduruků, their propensity for agriculture was not very great or very strong. Referring to the "Mundrucús" forcefully brought to and

/14 cont./

*241 192 262

a) Plants cultivated in the gardens:
bitter manioc—manoè, six varieties
manicuera—mano, manikue, two varieties
sweet manioc—makachi, two varieties
yams—awai, 11 varieties
sweet potato—wechick, four varieties
caladium—various names (poriri, kurudyudyut), two varieties
pumpkin—yurumu, yurumu a, various kinds
watermelon—borĩchis, borĩsis, three varieties
sugar cane—kanya
pineapple—ipara, five varieties
maize—mora, two varieties
rice—arũda
beans—feijão, wetoi, three varieties
peanut—wenambone
tobacco—be, e
curauá pineapple—ipara be

Also:
pepper—achi, achi a, four varieties
banana—aku, 11 varieties
cotton—buru, two varieties
urucú—tyuku, tyoku a
papaya—atũ a, two varieties

b) Plants cultivated outside the gardens:
gourd—ue e, wa e
jamaró gourd—uai a, wai a
/15/ arrowhead—opipa
coffee—kape, kape ip, various types
cacao—wadye, three varieties
genipa—warem ap, warem ap a
inga—chiriri
lemon—brimão, brimãu
orange—yarai, yarai ip
mango—mĩga, mĩka, various types
cashew—murtue, murcso, three varieties

/15 cont./

*241 Also:

192 pepper—achi, achi a, four varieties
banana—aku, 11 varieties
262 cotton—buru, two varieties
urucú—tyuku, tyuku a
papaya—atšu a, two varieties

*241 There is, therefore, a small group of plants which are found in the gardens as well as out: pepper, bananas, cotton, urucú, and papayas.

[249] For certain plant species, such as for example tobacco and the curauá pineapple, a plot of ground is often set aside, or a small garden is prepared separately.

249 Aside from these plants, which are useful to subsistence, the Munduruků also have a certain number of vegetables which backwoodsmen call "smell" and which they use when they are bathing, to give their body, and especially their hair, a more pleasant odor.

[302] A few herbs are also cultivated for medicinal purposes. Others yet [157] are used in the practice of certain superstitions and charms. Al- [189] though I am aware that these subjects are not directly related to agriculture, I mention them in passing since "cultivated plants" are involved.

*241 From this list, it becomes clear that the Munduruků must have
177 had considerable contact with civilization and with other tribes to have acquired such a number of useful plants. As for the ancient stock of plants cultivated by the Indians in the Amazon forest, tubercles must be mentioned first and foremost. Moreover, /16/ it seems that the use of some of these typically native plants, such as for example curauá pineapple or sweet manioc, is not very old, for a series of tribes possessing a type of agriculture quite similar to that of the Munduruků are not yet familiar with the cultivation of sweet manioc or curauá pineapple. (9)

[171] 9. Thus, for instance, the majority of the Carib tribes of the Brazilian Guianas are unfamiliar with the cultivation

/16 cont./

*241 177 [171] of sweet manioc, even though, in many respects, their agricultural system is quite similar to that of the Mundurukú.

The first great influence of civilization unquestionably occurred during the nineteenth century, following the pacification of the [361] Mundurukú, when they settled on the margins of the Tapajós. Through this contact, nearly all the plants cultivated on the lower Amazon became known to the Mundurukú and were, for the most part, adopted [797] by them. The old mission of Bacabal must also have had some influence on this development. The new agricultural acquistions, as well as their handling and usage, spread rapidly along the Tapajós, but very slowly toward the interior and especially toward the grass- ● 262 177 lands of Mundurucânia. The knowledge and use of manioc flour exemplifies this process. In the old days, the Mundurukú were not familiar with manioc flour and made only tapioca cakes. Nowadays, even in the villages of the interior, they all make flour. But, as I said, manioc flour is a relatively recent acquisition. My informant Tomé told me the following: "My grandmother told me, one day, that in her childhood, in the villages (of the interior), they did not [252] know yet how to make flour. They only made tapioca cakes, which sometimes they even roasted on stone (slabs)...." This was at the most 80 years ago. The Mundurukú of the Tapajós, on the other hand, being far more exposed to contact with civilization than the Mundurukú of the central grasslands, were already quite familiar with manioc flour in those days and even prepared it for commercial pur- [439] poses. Martius, Bates, and others, as we already indicated at the beginning of this work, speak of the important flour production and of the flour trading which the Mundurukú of the Tapajós carried on with the traders of Santarém and of the lower Amazon. It seems 241 177 obvious, therefore, that the spread of agricultural elements into the Tapajós region occurred /17/ at a rather uneven rate, and that in the case cited, in the villages of the interior, the making of manioc flour was acquired much later than in the villages of the Tapajós River. If this happened in connection with the mere usage of a plant

/17 cont./

*241 which they were already cultivating, the introduction of new plants 177 /must have been/ all the more /uneven/. Here, the process may have been even slower.

● 262 Of even more recent acquisition, especially through the influence 137 of the Franciscan mission founded in 1911 on the Cururu River, are 177 products such as rice, beans, and various other plants which are 799 cultivated chiefly by the religious sisters, but which have been adopted by the Indians on a very modest scale. During the last decades, the following fruit trees have reached them: the mango tree, the orange tree, the lemon tree, the coffee shrub, and a certain type of cacao tree. They were already familiar with other products such as maize, pumpkins, etc., but cultivated them on a very small scale.

*241 8. Weeding or cleaning. We have described the planting. A few facts remain to be given concerning the garden tasks after planting. It is obvious that, once the planting itself has been done, the plot still requires a certain amount of care. Not right away, but after several weeks or months. /sic/ This is the weeding. Between the planting and the harvest, two weedings of the garden are usually carried out, the entire plot being cleaned. They speak of the first and second cleaning, or of the first and second weeding. This is done almost exclusively with the machete. There is no specific time set aside for this, because it depends to a large extent on the weather (rains) and on the need. The first weeding is called tip ogn, the second karit ogn.

244 9. The harvest. The Indians generally use the regional term, "tearing up the plot," or "pulling up the bitter-manioc roots"— masok ta ogn. Within a year, the garden has matured and may be torn up. The manioc roots are pulled up by hand. The entire plot is not harvested at one time, but according to need. In order to pull up the manioc roots, a certain amount of strength and ability is required. Often, when the tubercles hold firm to overly hard ground, [412] the Indian digs with the machete around the roots in order to loosen the soil and pull out the manioc root /18/ with greater ease. This same technique of using the machete as an auxiliary tool in the extraction of manioc roots is also used in gathering other tubercles, such as yams, sweet potatoes, etc.